
ABSTRACT OF THE DISCLOSURE

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An upper shearing blade equipped with a protrusion of a triangle-columnar shape and a lower shearing blade equipped with a protrusion of the same shape are applied onto the overlapped portion of metal plates to be bonded, and then pressed into the metal plates in an oblique direction inclined with respect to the thickness direction by a stroke in such a range that the metal plates are not completely cut off. The operating loci of the upper, shearing blade and the lower shearing blade are overlapped each other so that one falls inside the other, and the sheared surfaces of the metal plates are formed into a bonded portion by plastic flow deformation. Therein, since a compressive force is applied onto the portions to be bonded, the portion being defined by the amount of overlap, and the portions are compressed to form a compressed portion after completion of bonding, the bonding strength enhances. Besides, since the protrusions on the shearing blades generate a pressing force pressing the sheared surfaces onto each other, by an effect of their inclined surfaces, a compression force applied onto the bonded portion further increases.

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An upper shearing blade 3 equipped with a protrusion 30 of a triangle-columnar shape and a lower shearing blade 4 equipped with a protrusion 40 of the same shape are applied onto the overlapped portion of metal plates 1 and 2 to be bonded, and then pressed into the metal plates 1 and 2 in an oblique direction inclined with respect to the thickness direction by a stroke in such a range that the metal plates 1 and 2 are not completely cut off. The operating loci of the upper, shearing blade 3 and the lower shearing blade 4 are overlapped each other so that one falls inside the other, and the sheared surfaces of the metal plates 1 and 2 are formed into a bonded portion by plastic flow deformation. Therein, since a compressive force is applied onto the portions to be bonded, the portion being defined by the amount of overlap, and the portions are compressed to form a compressed portion after completion of bonding, the bonding strength enhances. Besides, since the protrusions 30 and 40 on the shearing blades generate a pressing force pressing the sheared surfaces onto each other, by an effect of their inclined surfaces, a compression force applied onto the bonded portion further increases.